

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-160249
 (43)Date of publication of application : 03.06.1992

(51)Int.CI. F16F 15/02
 B32B 7/02

(21)Application number : 02-286760 (71)Applicant : KOBE STEEL LTD
 (22)Date of filing : 23.10.1990 (72)Inventor : UTSUNO HIDEO
 SUGIMOTO AKIO

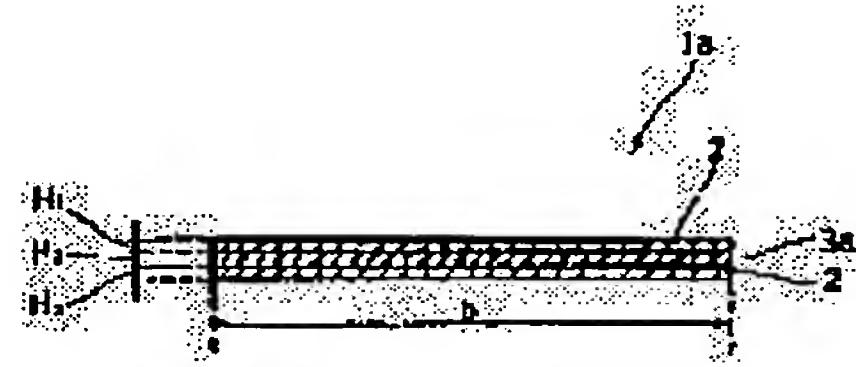
(54) VIBRATION DAMPING PLATE

(57)Abstract:

PURPOSE: To select a suitable material of a viscoelastic body in a simple manner with no computation as well as to remarkably enhance a vibration damping effect with the selected material by using the viscoelastic body whose complex shearing elastic modulus at the working temperature satisfies specified conditions.

CONSTITUTION: In a vibration damping plate 1a, a viscoelastic body 3a is used, whose complex shearing elastic modulus $G=G_1+jG_2$ at the working temperature satisfies an expression I, wherein E represents the Young's modulus of the plate member 2 of the damping plate 1a. Since this damping plate 1a satisfies the conditions required by the first and the second expressions on G_1 and G_2 , the loss factor of the damping plate becomes maximum in the range of audio frequencies. In addition, since the damping plate 1a satisfies the condition required by the third expression on G_2/G_1 , it is possible to make the loss factor of the damping plate 1a equal to or more than about 0.05, so that its vibration damping effect can thereby be enhanced remarkably.

1.0 < E ≤ G₁ ≤ 1.0
 1.0 < E ≤ G₂ ≤ 1.0
 & G₂ / G₁ ≤ 0.5



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[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]